

REMARKS

Applicant respectfully requests reconsideration. Claims 1-29 were previously pending in this application. By this amendment, Applicant is canceling claims 2-4, 19, and 24 without prejudice or disclaimer. Claims 1, 5-15, 18, 20-23, and 27 have been amended. New claims 30-34 have been added. As a result, claims 1, 5-18, 20-23, and 25-34 are pending for examination with claims 1, 18, and 27 being independent claims. No new matter has been added.

I. **Claim Rejections Under 35 U.S.C. §102**

Claims 1-6 and 16-27 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Published U.S. Patent Application No. 2002/0030675 ("Kawai"). Applicants respectfully disagree.

A. **Claims 1 and 5-17 and 34**

Independent claim 1 is directed to a stereoscopic-vision image processing apparatus for generating a stereoscopic-vision image. The stereoscopic-vision image processing apparatus comprises a first memory region to store actual display information describing at least a size of a display area of a display unit in which the stereoscopic-vision image is to be displayed and a second memory region to store a plurality of viewpoint images having a parallax with respect to each other and assumed display information about an assumed display unit on which the stereoscopic-vision image was desired to be displayed when generated. The assumed display information comprises an assumed display size and/or assumed display type of the assumed display unit. *The apparatus further comprises at least one control circuit adapted to compare the actual display information and the assumed display information and determine whether the stereoscopic-vision image can be generated properly when the plurality of viewpoint images are displayed on the display unit.*

In the apparatus of claim 1, the second memory stores both image data in the form of a plurality of viewpoint images and assumed display information comprising an assumed display size and/or type of an assumed display unit. This assumed display unit is one on which the stereoscopic-vision image was desired to be displayed when the image was generated. As described in the specification, this information can be stored in any of numerous different formats and can take any

of various different forms. One implementation described in the Specification is illustrated in FIGs. 10 and 12-13. In that implementation, a data component in a JPEG file format comprises both “combined image data” and a “marker segment” comprising information about the image (Applicants’ Specification, page 21, lines 4-26). Included in the information about the image (the “accessory information”) is image file directory information that, as shown in FIG 10, includes 3-D image file directory information (“IFD”), among other types of information. The 3-D IFD may be used to control generation of a stereoscopic-vision image from the plurality of viewpoint images (Page 22, lines 20-24). Examples of the type of information that may be included as 3D IFD is illustrated in FIGs. 12-13, including “Picture Structure” information such as a type and/or size of an assumed display for the stereoscopic-vision image (Page 25, lines 11-21). The assumed display is one selected at the time of generation of the stereoscopic-vision image as one on which the image will be displayed properly. When the JPEG file is received at an image generation apparatus (such as the apparatus of claim 1) to be displayed on an actual display device, this assumed display information may be used by a control circuit to determine whether the stereoscopic-vision image can be displayed properly on the actual display. For example, if the size of the assumed display varies greatly from that of an actual display, then the stereoscopic-vision image may be stretched/compressed and the amount of parallax may be increased/decreased beyond an acceptable range and eyestrain may result (Page 25, line 26, to page 26, line 6). Thus, in the JPEG file of this exemplary implementation there is stored both image data and assumed display information, and the assumed display information is evaluated when displaying the stereoscopic-vision image.

Kawai teaches techniques for generating a stereoscopic image on a display device (Abstract). Kawai does not, however, teach or suggest “at least one control circuit adapted to compare the actual display information and the assumed display information.” Rather, Kawai instead teaches techniques for *generating* an image with a desired parallax, and teaches nothing regarding assumed display information that may be compared.

Kawai teaches several different techniques for generating an image with a desired parallax. In its first technique, Kawai teaches transmitting a request from a display device to a server indicating a requested image and a “maximum allowable parallax of the 3D display device” (Kawai, ¶0079). In response, the server generates the stereoscopic image by rendering the requested image,

and returns the requested data (¶0079). As an alternative, Kawai describes that the server may return the un-rendered image data to the client, and the client may render the image locally to generate a stereoscopic image that can be properly displayed on the screen (¶0080). In another technique, Kawai teaches that, rather than the image data being stored on a server, it may be stored on a client (¶0087). The clients may then transmit the image data along with desired parallax data described by the display device to the server and request that the server render the image data into a stereoscopic image (¶0087). Kawai further discloses that in one technique a camera system may be set up to receive information about a desired amount of parallax for a stereoscopic image and take a plurality of viewpoint images according to the information (¶0089). The image data can then be transmitted to the display device to be displayed with the desired amount of parallax.

In each of these cases, a stereoscopic image is rendered or generated precisely for the actual display device on which it will be displayed. Thus, there is no need to determine whether the stereoscopic image can be properly displayed. Further, in the system of Kawai, as there is no “assumed display unit on which the stereoscopic-vision image was desired to be displayed when generated,” there can be no assumed display information stored in a memory and there is nothing for a control circuit to compare. Accordingly, in contrast with the apparatus of claim 1 the system of Kawai does not have any control circuit to “determine whether the stereoscopic-vision image can be generated properly when the plurality of viewpoint images are displayed on the display unit” based on assumed display information.

Therefore, as Kawai does not teach or suggest all limitations of claim 1, claim 1 patentably distinguishes Kawai and is allowable. Claims 5-17 and new dependent claim 34 depend from claim 1 and are allowable for at least the same reasons. Withdrawal of this rejection is respectfully requested.

B. Other claims

Each of the other independent claims (i.e., claims 18 and 27) includes limitations that similarly distinguish over Kawai. For example:

- independent claim 18 recites, *inter alia*, “additionally storing in the single data structure, together with data of the plurality of viewpoint images, accessory information relating to the

assumed display unit on which the stereoscopic-vision image is desired to be displayed, the accessory information comprising the assumed display size of the assumed display unit;” and - independent claim 27 recites, *inter alia*, “comparing actual display information … and assumed display information … [and] determining, based on the comparing, whether the stereoscopic-vision image can be displayed on the first display unit with a parallax within a threshold parallax tolerance.”

As discussed above in connection with claim 1, stereoscopic images are rendered or generated precisely for the actual display device on which they will be displayed. Nowhere does Kawai teach or suggest generated image data for an assumed display device, and thus nowhere does Kawai teach or suggest storing in a single data structure, along with image data, accessory information on an assumed display device nor comparing actual display information to assumed display information.

Therefore, for at least these reasons, claims 18 and 27 distinguish Kawai and are allowable. Claims 20-23 and 25-26, and claims 28-33, depend from claims 18 and 27, respectively, and are allowable for at least the same reasons. Withdrawal of these rejections is therefore respectfully requested.

II. Claim Rejections Under 35 U.S.C. §103

Claims 7-15 and 28-29 were rejected under 35 U.S.C. §103(a) as allegedly being obvious over Kawai in view of Published U.S. Patent Application No. 2002/0177993 to (“Veditz”). Each of these claims depends from a claim believed to be allowable for at least the reasons discussed above. Therefore, these rejections are believed to be moot and will not be discussed further herein.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. S1459.70171US00.

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Respectfully submitted,

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